

HS315

Hybrid system controller for 48Vdc generators typically used in Telecom applications

DESCRIPTION

HS315 aims to minimise generator run time and optimize both fuel consumption and running hours.

This hybrid controller features whole site voltages and currents monitoring with the ability to communicate with smart batteries.

HS315 has been designed to control DC generator and is able to monitor load and battery levels, as well as manage the automatic stop/start of the genset.

Specific functions have been included to ensure a comprehensive control and protection of the genset, the battery, the charging system and of an auxiliary renewable power source (if any).

The standing control of the battery, and its charging process, ensures the battery long lasting, reducing fuel consumption and service/maintenance on the engine.

The in-built BMS provides information like charge level and remaining supply time estimation, allowing manual control of the system as well.

Configurable specific I/O are provided assuring the specific requirements of the application.

Extensive input and output capability with optional communication interfaces

(**HS315Link** 5G ready versions), make this an extremely powerful single genset controller.

HS315 is compatible with both electronic CANBUS J1939 and non-electronic engines.

All the parameters can be set directly by the controller's keyboard or, alternatively using the free software tool (**BoardPRG3**), available from SICES' website.

Historical events and DTC logs can be accessed from the front panel and read on the display.

HS315 supports several communication interfaces for local or remote control.

HS315Link 5G has built in global 5G modem with global 2G fallback capability, which also embeds the GNSS localization system (GPS/GLONASS/BD) to provide a high availability solution, that offers industry-leading accuracy and performance. Useful where asset tracking and monitoring are required.

INPUTS - OUTPUTS AND AUXILIARY FUNCTIONS



12 Digital inputs



12 Digital output



3 Analogue inputs



1 Analogue outputs



AND/OR
Logic control



Event history log



16 Calendars
4 timers



USB port



RS232



RS485



PLC Logic control



Ethernet connection
HS315 Versions only



GPRS/GPS
Link Versions only



5G ready
Link Versions



TIER4 final STAGE V

- N. 12+1 Programmable digital inputs (N.1 for the emergency stop push button).
- N. 3 Analogue inputs, if not used, can be used as not insulated digital inputs.
- N. 1 Input for D+ (if not used can be used as digital).
- N. 1 Analogue input (PT100) for battery temperature measurement.
- N. 2 Aux. relays (3A) for fuel solenoid + Crank.
- N. 8 Static (transistor) outputs.
- N. 2 Relays (10A) for power changeover management.
- N. 1 Analogue and insulated output max $\pm 10Vdc$ for the AVR or speed governor management.

As option

- N. 32 Additional digital inputs and 16 additional digital outputs with DITEL modules.
- N. 10 Additional analogue inputs for sensors measure from Pt100 (DIGRIN), thermocouples (DITHERM) or 0...10mA - 0...20mA (DIVIT).
- N. 10 Additional and fixed analogue inputs listed in CANBUS J1939 protocol.
- N. 4 Additional analogue outputs (DANOUT).

MAIN FEATURES

- > Automatic start/stop of the genset, according to storage battery voltage and charge level.
- > Full “Battery Management System” (BMS) built into, for maximum battery life and performance.
- > Voltage and current compensation according to battery temperature.
- > Storage battery level visualization.
- > Speed control and/or excitation control of the engine.
- > Management of an auxiliary renewable power source (if any).
- > Dedicated configurable inputs for DC voltages and currents.
- > Real time clock and event log.
- > Freely configurable timers.
- > Genset fuel consumption and maintenance reduction.
- > Several communication ports available.

COMMUNICATIONS

HS315

- N.1 USB Port.
- N.1 Serial port RS232 Modbus RTU (supports external modem).
- N.1 Insulated serial port RS485 Modbus RTU.
- N.1 Ethernet port (RJ45) Modbus TCP.
- N.1 Insulated CANBUS J1939 Interface.

HS315Link

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- N.1 Insulated CANBUS J1939 Interface.
- GPRS Modem.
- GPS Antenna.
- Motion sensor, accelerometer and gyroscope.
- Compliance with CE1588.

As option

- REWIND - GPRS/GSM/GPS Device.
- DANCE - Ethernet interface.
- ANTENNA GPRS or GPRS+GPS.

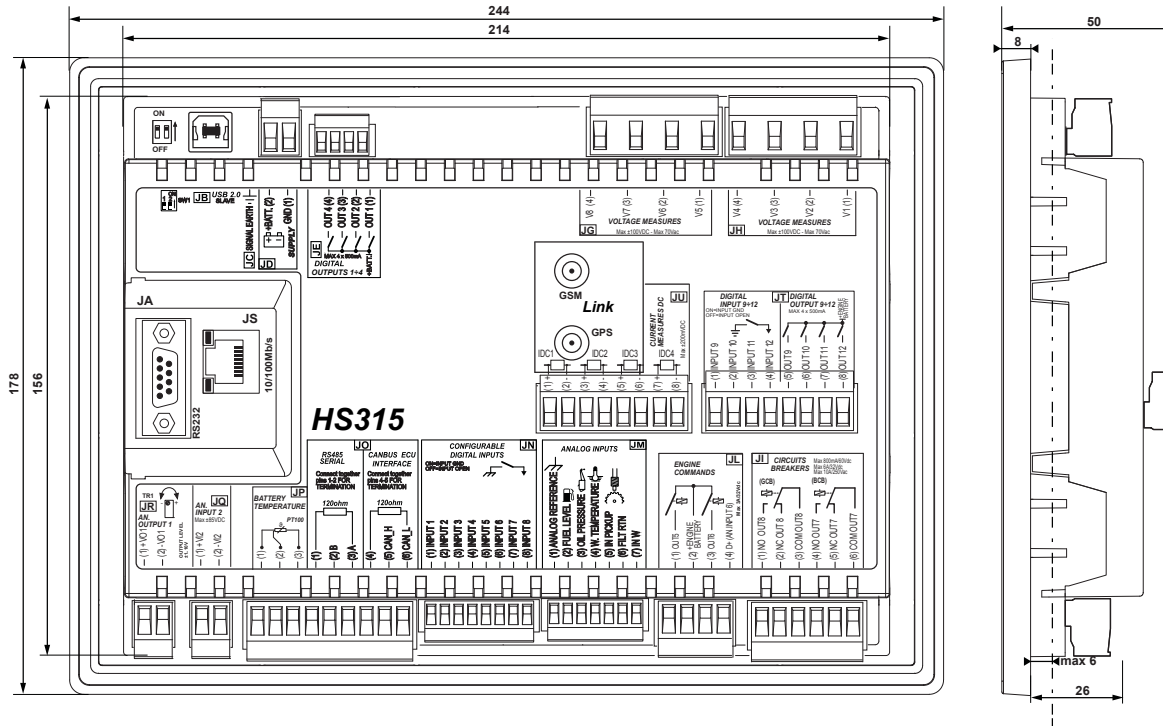
HS315 and HS315Link, provides both a direct interface with SIMONE software, for a real time monitoring system, without any external devices.

EMBEDDED FUNCTIONS

- > Automatic/manual start with configurable start/stop timers.
- > Configurable inputs/outputs.
- > Storage battery visualizations:
 - temperature,
 - residual charge,
 - depth of discharge (DOD).
- > Automatic start/stop based on storage battery status.
- > Engine diagnostic code.
- > Periodical test.
- > Real Time Clock with internal rechargeable Lithium battery.
- > Fuel pump management.
- > 126 Events log.
- > 32 Additional events log for the charge/discharge of the storage battery.
- > Pre-glow and coolant heater management.
- > Remote start and stop.
- > Hours counter for the maintenance schedule.
- > Daily counter with embedded calendar for the maintenance.
- > Embedded alarm horn.
- > Engine speed measurement by pick-up, frequency or W.
- > Configurable by PC or controller's keyboard.
- > Remote firmware update.
- > SMS communication.
- > NTP, DHCP, DNS e SNMP Support.
- > Multilingual device. The display languages available are: IT, EN.

TECHNICAL DATA

- > Supply voltage: 7...32 Vdc.
- > Power consumption: typical less than 2W (auto mode, stand-by, LCD lamp saving active).
- > Operating frequency 50Hz or 60Hz (AC reading only).
- > LCD with backlight.
- > Operating temperature: -25 °C to 60 °C.
- > Burn in @ 50°C for 48h with test report for each controller.
- > Protection degree: IP65 (gasket included).
- > Weight: 750gr.
- > Overall dimension: 244 (W) x 178 (H) x 50 (D) mm.
- > Panel cut-out: 218 (W) x 159 (H) mm.
- > Graphic display dimensions: 70x38mm - 128x64 pixel.
- > EMC: conform to EN61326-1.
- > Safety: built in conformity to EN61010-1.



CERTIFIED MANAGEMENT SYSTEM
ISO 9001 - ISO 14001
BS OHSAS 18001



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